Expanding Your Lens Options for Irregular Corneas

Experts discuss a customized soft lens that delivers visual acuity and comfort.
Craig W. Norman, FCLSA (moderator)
Mr. Norman is director of the Vision Research Institute at the Michigan College of Optometry, Ferris State University in Big Rapids. He has received honoraria from Bausch + Lomb.

Renee Reeder, OD, FAAO
Dr. Reeder is an associate professor and chief of the Cornea Center for Clinical Excellence at the Illinois College of Optometry in Chicago. She has received honoraria from Alcon, Bausch + Lomb, Blanchard and Metro.

Robert Ryan, OD, FAAO
Dr. Ryan practices at Visionary Eye Associates in Rochester, N.Y. He is clinical associate in ophthalmology at the University of Rochester School of Medicine. He holds stock in Novartis and has received honoraria from Bausch + Lomb.

Stephanie Su, OD, FAAO
Dr. Su practices at Visionary Eye Associates in Rochester, N.Y. She has received honoraria from Bausch + Lomb.
Mr. Norman: Eyecare practitioners have various contact lens options for patients who have keratoconus, pellucid marginal degeneration (PMD) or corneas that have been altered by surgery or trauma. Our panelists have extensive experience fitting these challenging corneas, using all of the available options. Let’s briefly review the designs you typically use in your practices.

Dr. Su: Depending on the extent of a patient’s condition, the type of lenses he’s currently wearing and any issues he may be having with those lenses, I may try a small-diameter GP lens or a larger-diameter semi-scleral lens. Some of my patients are wearing hybrid lenses, and some are wearing piggyback lenses. I also use custom soft lenses for patients who are intolerant of the large-diameter GP lenses and hybrids.

Dr. Reeder: I predominantly use scleral lenses and custom soft lenses. The KeraSoft® IC lens (Bausch + Lomb) has really been a game changer for me. Many of my patients are moving into this lens because they’re intolerant of their corneal lenses. I also appreciate having the KeraSoft IC lens available as an alternative to scleral lenses for my patients who have PMD.

Mr. Norman: Has there been a decrease in the number of corneal lenses being used for irregular corneas in your practice?

Dr. Reeder: Absolutely. We’re definitely trending toward larger-diameter lenses and specialty soft lenses.
Dr. Ryan: I concur. I’ve seen a decrease in the overall number of corneal lenses we use in our practice for initial fits and refits of irregular corneas. Patients who have had to deal with the limitations of corneal lenses for years now have alternatives.

Mr. Norman: Let’s discuss which patients you consider good candidates for KeraSoft® IC lenses.

PATIENT SELECTION
Dr. Reeder: KeraSoft IC lenses are appropriate for a vast variety of patients. In addition to using them for PMD and all stages of keratoconus, I’ve also fit patients who have corneal irregularities after refractive surgery. I’ve had success with some ectasias, and I’ve even fit patients with plateau-shaped grafts after penetrating keratoplasty. I try to steer clear of people who have extremely delicate corneas. I like to use sclerals in those cases.

Dr. Su: KeraSoft IC lenses are also a great option for patients with significant cylinder when traditional custom lenses haven’t been successful. Many patients we’ve put in KeraSoft IC lenses have been intolerant to other lenses. I had a student whose GP lenses kept popping out at night. He has early keratoconus and has been very successful with KeraSoft IC, in terms of comfort and vision.

Dr. Ryan: I’ve used the KeraSoft IC lens with excellent results for several other conditions. A patient with unilateral keratectasia, for example, did well with this lens, and another patient who had struggled for years with limbal stem cell deficiency has settled nicely into this product. I echo the sentiments of the other panelists. If you have a patient with an irregular cornea, it makes sense to try a KeraSoft IC lens.

Mr. Norman: How does the KeraSoft IC lens fit into your fitting philosophy?

Dr. Ryan: I’m a tried and true GP fitter, so this lens required a mindset change for me. But seeing how the lens performs, I now consider it among my first options. I haven’t abandoned rigid corneal lenses, because I think they’re still a viable option for some patients, but if an individual is particularly active or works in an environment where debris is likely to get under the lens, or if lens stability or comfort is an issue, I usually try the KeraSoft IC lens first.

Dr. Reeder: I’ve been fitting corneal GPs for a long time with great success, and I was surprised by how well patients were seeing with the KeraSoft IC lens. If I have a patient with early or mild keratoconus, especially one who is refractible, I offer the KeraSoft IC lens as a first choice.

FITTING PROCESS
Mr. Norman: Dr. Su, tell us about your experience with fitting KeraSoft IC lenses. Do you have any tips to share?

Dr. Su: I would give the same advice that I give to anyone fitting GP lenses: Listen to your patients. You may feel it’s a perfect fit, and the lens may look beautiful on the eye, but if the patient is uncomfortable, you wouldn’t dispense that lens. It’s the same with KeraSoft IC lenses. If a lens looks nice on the eye but the patient has fluctuating vision upon the blink, you’ll want to modify the lens to stabilize the vision. The endpoint is comfort and vision.

Mr. Norman: This lens is fit differently. For example, for a cornea that’s 50D, you might incorrectly reach for the steepest base curve in the fitting set because that’s what you do in the GP world. That’s a mistake with KeraSoft IC. Were you surprised by how the lens behaved on the eye?

Dr. Su: I had to get accustomed to having up to 2 mm of movement. My fitting process has improved. Now that I know the patient is comfortable and seeing well with all that movement, I’ve been able to reduce the number of visits I have with my patients.

Mr. Norman: I agree. We live in a disposable lens world, where we think a lens that moves just 0.1 mm is too loose. The vision result you described is interesting, in that it’s not just the endpoint on a Snellen chart. It’s really what’s happening post blink when some variability can occur. Often, that suggests a lens is slightly too steep or too flat by one base curve. Dr. Ryan, what are your thoughts on the fitting process?

Dr. Ryan: Using the MoRoCCo VA — movement, rotation, centration, comfort and visual acuity — approach is critical to fitting success. I think it’s worthwhile for practitioners who are just starting to fit this lens to take the time to evaluate a base curve on either side of what they believe is optimum — one step steeper and one step flatter — to increase their knowledge base and comfort level. Our beliefs and experiences with traditional soft lenses tell us that steeper lenses tend to be tight lenses and flatter lenses tend to be loose. With the KeraSoft IC lens, steep lenses may appear to be loose. The clinical response is almost paradoxical.

Mr. Norman: Dr. Su, when you started using
KeraSoft IC lenses, did you follow the fitting guide?

**Dr. Su:** Yes. This lens is so different that you have to start there. Once you understand the concept, you can fine-tune your fitting process. I find myself going back to the fitting guide when I have a difficult case. It’s a good reference, because sometimes modifications aren’t as intuitive as you would think.

**Mr. Norman:** Dr. Su, when you’re satisfied with the fit, what do you do next?

**Dr. Su:** After 5 minutes, I perform a quick over-refraction for the patient to get a feel for where he’s at visually, then I let the lens settle and take another look to make sure that’s the lens I want. I then conduct a more detailed over-refraction and let the patient sit with the trial frame on.

**Dr. Reeder:** I initially use an autorefractor, which reduces my chair time dramatically. Then I put the trial frame on the patient, walk him out of the examination room and find out if he can function as well in the real world as he did reading the Snellen chart.

**Mr. Norman:** Dr. Reeder, is the first lens you order usually your final lens, or do you need to make adjustments?

**Dr. Reeder:** My biggest challenge is the patient whose over-refraction was huge and I know there’s cylinder, but I just can’t get it. I often have to reorder those lenses, because now that I have the lens in the proper spherical power, I can fine-tune the astigmatic correction.

**Dr. Su:** I usually have to refine high prescriptions. Often, the correction is better than what patients have been wearing, so they have functional vision and can leave with the lenses. Generally, I need to order another lens when they return.

**Mr. Norman:** Dr. Reeder, tell us about your experience with the KeraSoft® IC online training.

**Dr. Reeder:** The training is quite helpful, because fitting this lens is somewhat counterintuitive to standard soft lenses, particularly when evaluating movement. Learning the MoRoCCo VA — movement, rotation, centration, comfort and visual acuity — approach is important. It enables you to follow the fitting guide and speak the same language as your laboratory.

**Mr. Norman:** Dr. Su, do you work with the laboratory consultants when ordering lenses?

**Dr. Su:** Yes. I usually contact a consultant to confirm the lens to order when I’m incorporating a patient’s over-refraction and any rotation.

**Dr. Reeder:** I also use the consultants, especially for Sector Management Control. If I need a steeper or flatter periphery based on the corneal profile, but it’s not in my fitting set, I’ll take a picture to share. I’ll tell the consultant if the patient is seeing well with a lens, what the parameters are, if it’s fluting and so on. Then, I’ll send a video clip, so the consultant can see what it’s doing and confirm that it makes sense.

**Dr. Reeder:** I typically do. I’m a big fan of the MoRoCCo VA, and I love the fitting guide. I also think getting an over-refraction and seeing what’s happening after the blink is crucial to reinforce what you’re seeing. I go through those steps with each lens. I’ve also found that 1 mm to 2 mm of movement is critical. I’m fitting this lens flatter than I ever expected to, but when I do that, not only does it become more comfortable and move more, the vision improves dramatically. Anyone who has never fit customized soft lenses before and is used to disposables will need to become familiar with how this lens moves and behaves on the eye.

**Dr. Ryan:** The designers of this lens did their homework. There’s a reason they put a particular peripheral curve system with a particular base curve, and it works quite well for most patients. Keeping that in mind, I limit the peripheral curve changes to those situations where they’re really needed.
Mr. Norman: What lens care regimen do you recommend for KeraSoft® IC lenses?

Dr. Su: The majority of my patients use a hydrogen peroxide system. Some may add a daily cleaner if they are prone to deposits.

Dr. Reeder: Most of my patients use a peroxide system, as well. Occasionally, I recommend a multipurpose product for patients who can’t do a 6-hour soak — someone who wants to go swimming and then reapply his lenses, for example.

Mr. Norman: Have you or your staff developed any techniques to help patients apply KeraSoft IC lenses?

Dr. Su: We place a mirror flat on a table and have the patient lean over it, similar to applying a scleral lens. We recommend that they make a tripod with their fingers on which to balance the lens.

Dr. Reeder: We suggest two fingers. If a patient has poor dexterity, we cut off the tip of a plunger and have him balance the lens on it. That way, he can look through it instead of trying to look at the lens.

Mr. Norman: What techniques do your patients use to remove their lenses?

Dr. Reeder: Pinching off the lens works well for patients. A few patients have to remove it more like a GP lens by manipulating the lids to pop it out, using the “6 & 12” technique.
Refitting From GP Lenses

Mr. Norman: Dr. Ryan, do you have any advice for practitioners who want to refit patients from GP lenses into KeraSoft® IC lenses?

Dr. Ryan: Patients who have been wearing corneal GP lenses are likely to have some corneal molding, so it’s important to allow time for the cornea to relax out. We also need to have reasonable expectations, because sometimes in our eagerness to rehabilitate these patients, we may reorder lenses too quickly.

Mr. Norman: If you’re transitioning a patient with bilateral keratoconus, do you change both lenses at the same time?

Dr. Ryan: Depending on the patient’s present situation, I may recommend changing one lens at a time, so the patient will have functional vision during the transition.

Mr. Norman: In patients you have refit from other lens modalities, have you seen any changes in staining and bulbar injection, or any other differences?

Dr. Reeder: I’ve seen a decrease in central corneal staining, and for those keratoconic patients with allergies, I’ve seen some reduction in papillary changes as well.

Mr. Norman: What aspect of the KeraSoft IC lens are patients most satisfied with? Is it increased wearing time or comfort?

Dr. Su: It’s a combination of both. One of my patients, a nursing student, came in a little sheepish and told me he had worn his lenses 24 hours straight. He didn’t sleep in them, but he stayed awake because he had exams and papers due. That’s how comfortable this lens is for him. Being able to wear their lenses comfortably for longer periods improves quality of life for these patients.

CHANGE THEIR WORLD

Mr. Norman: How would you describe your patients’ overall satisfaction with KeraSoft IC lenses?

Dr. Su: The majority of my patients are very happy with this lens, not just with their vision, but also with the comfort and their ability to function well.

Dr. Ryan: It’s a liberating lens for our patients who have struggled with a myriad of options. It truly is game changing.

Dr. Reeder: Patients love this lens. They feel more normal. They have a spare lens. They don’t need to wear two different lenses and keep two cases and two different care systems for piggyback lenses. Many of my patients have increased their wearing times to 12, 14, even 16 hours with KeraSoft IC lenses. They’re getting a full day of good vision, and they’re comfortable. That’s huge.

I’d like to share a case that really brought this home for me. One of my patients had undergone corneal collagen crosslinking for keratoconus, and we were slowly trying various vision-correction options, starting with corneal GPs, then sclerals, hybrids and piggybacks. He was 15 years old, and he was mad at the world. He wouldn’t even talk to me. After being fitted with KeraSoft IC lenses, he was like a different person. At his last visit, he was joking with the interns and had a big smile on his face. He looked at me and said, “These lenses changed my world.” You just can’t argue with that.
KeraSoft® IC: Correct the vision rather than mask the problem

A revolutionary soft lens design for keratoconus and other irregular corneas

KeraSoft® IC soft contact lenses provide vision correction by using anterior aspheric optics and “drape” over the cornea rather than using thickness of material to “mask” the irregularity. The patented design is customizable and offers balanced overall thickness with spherical aberration control. It features an adjustable periphery, allowing the lens to fit almost any corneal shape.

KeraSoft® IC is available from these authorized laboratories:

Art Optical Contact Lens, Inc.
www.artoptical.com
800-253-9364

Metro Optics
www.metro-optics.com
800-223-1858

ABB CONCISE
www.abbconcise.com
800-772-3911

TruForm Optics
www.tfoptics.com
800-792-1095

Kerasoftic.com

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